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The Analysis of the Role of Monetary and Agricultural Economy in the Structure and Development of Konawe Regency's Economy as a National Mining Area

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This study investigates the structural economic transformation and emerging macroeconomic vulnerabilities driven by the rapid expansion of nickel downstreaming in Konawe Regency, Southeast Sulawesi—one of Indonesia's priority industrial mining zones. A quantitative descriptive approach using time-series data from 2010 to 2024 applies Shift Share Analysis (SSA), Location Quotient (LQ), and Dynamic Location Quotient (DLQ) to assess sectoral competitiveness and structural change. The results show a significant reconfiguration of the regional economy, reflected in the declining competitiveness of the agricultural sector (LQ falling from 1.467 to 0.686) and the sharp rise of the manufacturing sector linked to the Morosi Industrial Area (LQ increasing from 0.726 to 5.333). DLQ results indicate that manufacturing is the only sector demonstrating sustained dynamic competitiveness (DLQ 2.096 during 2019-2024), while social sectors such as education and health remain stagnant. This transformation creates macroeconomic pressures, including heightened inflation risks, increasing dependence on external capital and commodity price fluctuations, and widening income inequality. Strengthening regional economic resilience therefore requires coordinated fiscal-monetary policy support and strategic economic diversification aligned with the long-term vision of Indonesia Emas 2045.

Keywords: Nickel downstreaming; Structural transformation; Sectoral competitiveness; Macroeconomic vulnerability; Indonesia Emas 2045.

INTRODUCTION

The economy of a region is strongly influenced by its sectoral structure and the potential of its natural resources. One of the primary indicators used to measure regional economic growth is the Gross Regional Domestic Product (GRDP), which represents the value added generated by all economic sectors within a given period (Content & Frenken, 2016; Porter, 2003). Through GRDP analysis, the relative contribution of each sector can be identified, including the strategic role of the mining sector. The mining sector, which encompasses commodities such as minerals, metals, and fossil energy, often serves as a major contributor to GRDP in resource-rich developing countries (McMahon & Moreira, 2014). However, the dominance of this sector can trigger structural challenges including inter-sectoral disparities, dependency risks, and sustainability issues (Buchholz & Bathelt, 2021; Dannenberg et al., 2018; Haryadi, 2016, 2017).

Global experiences show that the success of development in mining-based regions depends on the extent to which diversification and downstream industrialization can be achieved. Many developing economies such as Australia, Brazil, Chile, Russia, and South Africa exhibit similar characteristics: mining acts as an economic driver while simultaneously creating vulnerabilities in the form of inequality and exposure to commodity shocks (Djamhari et al., 2024; González & Onederra, 2022). In contrast, countries like Norway and the United Arab Emirates have managed to build resilience through diversification and strong governance of natural resource wealth (Bradshaw et al., 2019).Indonesia holds a highly strategic position because it possesses approximately 42-52% of the world's nickel reserves, making

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it a key player in global energy transition industries (Djamhari et al., 2024). This contribution can be observed in Figure 1, which highlights Indonesia's dominance in global nickel reserves compared with other major reserve holders. Although the nickel sector contributes significantly to national GDP, foreign investment, and state revenues, dependency on raw ore extraction and the limited number of downstream industries still pose fundamental structural challenges (Djamhari et al., 2024; Gedepuraka & Kusumandaru, 2024). These conditions create a paradox, where abundant natural resources do not automatically guarantee equitable regional prosperity.

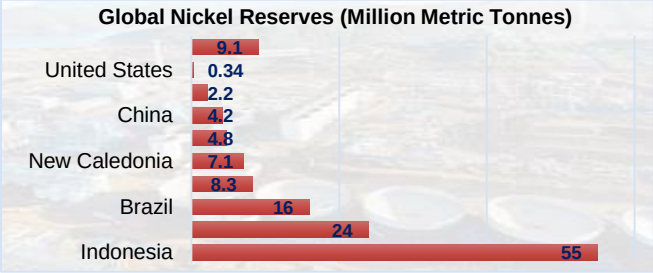

Figure 1. Global Nickel Reserves by Country in 2023.

Konawe Regency in Southeast Sulawesi is a clear example of this dynamic. The establishment of the Indonesia Konawe Industrial Park (IKIP) in Morosi and Routa as part of the National Strategic Projects under Presidential Regulation No. 109/2020 (Republic of Indonesia, 2020) has reshaped its economic structure. GRDP data show that between 2019 and 2023, the manufacturing sector contributed over 50% to Konawe's economy, while agriculture contributed around 16% and mining approximately 7%—a stark contrast to historical conditions where agriculture, forestry, and fisheries dominated (BPS Konawe, 2023). This change reflects sectoral shifts that require deeper structural analysis, particularly regarding the repositioning of agriculture in the face of manufacturing expansion linked to nickel downstreaming.

Although its relative share has declined, empirical evidence suggests that agriculture still has an economic base potential in Konawe. Nurcayah et al. (2023) reported a Location Quotient (LQ) value of 2.04, indicating agriculture remained a base sector at that time. Meanwhile, recent trends show a declining LQ, as identified in this study. The discrepancy arises from different time periods and commodity breakdowns: Nurcayah et al. focused on broader agricultural sub-sectors using earlier datasets, whereas this study captures more recent structural shifts driven by rapid industrialization.

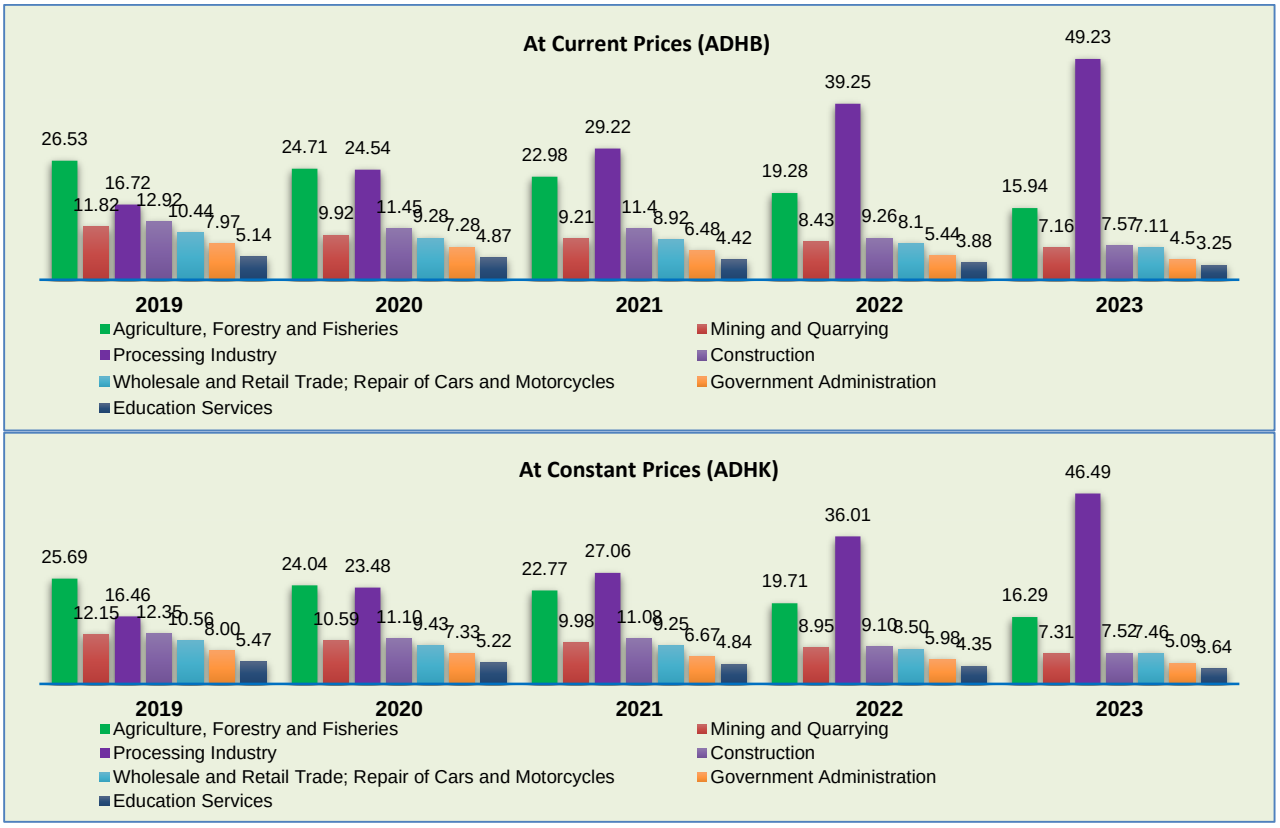

Figure 2. Distribution of Konawe Regency GRDP in 2019-2023 by ADHB and ADHK (Presented 7 Business Fields that Contribute >5%).

This highlights the importance of updated sectoral competitiveness analysis.

Existing literature predominantly examines environmental impacts of mining (Kurniawan et al., 2021; Irawati, 2020), food security concerns (Alwi et al., 2024), or sectoral analysis that lacks broader structural integration (Fu & Tang, 2024; Buchholz & Bathelt, 2021). However, comprehensive studies analyzing GRDP dynamics, competitiveness shifts in base sectors, and transformation projections toward 2045 remain limited.

Therefore, this research not only identifies sectoral contributions through GRDP trends but also evaluates competitiveness through Location Quotient (LQ), Dynamic Location Quotient (DLQ), and Shift Share Analysis (SSA), while formulating future development scenarios aligned with the Indonesia Emas 2045 vision. The findings are expected to enrich the academic discourse on mining-driven regional economic transformation and provide policy recommendations that strengthen economic diversification, inclusiveness, and long-term sustainability.

The neoclassical growth theory pioneered by Robert Solow (1956) and Trevor Swan emphasizes the importance of capital accumulation, labor growth, and technological progress in driving long-term economic growth (Jones, 2023; Acemoglu, 2022; Barro & Sala-i-Martin, 2021; Mankiw et al., 2021). In the Solow-Swan model, although physical investment and labor expansion play an initial role, technological advancement becomes the dominant factor in enhancing productivity. The law of diminishing marginal returns implies that sustainable growth can only occur through continuous technological innovation. This theory is relevant to the context of Konawe, where the mining sector serves as a source of capital accumulation, the agricultural sector absorbs labor, and technological progress acts as a key factor in accelerating structural transformation.

As a critique of the neoclassical model, the endogenous growth theory emphasizes that internal factors such as innovation, education, research and development (R&D), and infrastructure development are the main drivers of long-term growth (Lucas, 1988; Baumol, 2002). Romer highlights the role of non-rival knowledge in accelerating productivity, while Lucas underscores the importance of human capital accumulation through education. Schumpeter further adds that creative destruction serves as the engine of structural change. In the context of Konawe, although mining functions as the primary economic driver, sustainable growth can only be achieved if internal factors such as education and R&D are strengthened.

Rostow (1960), through his model The Stages of Economic Growth, describes five stages of economic development, ranging from traditional society to mass consumption. The model emphasizes the importance of investment and structural transformation toward industrialization. Within the context of Konawe as a national mining zone, Rostow's framework can be applied to map the region's economic position. Nickel mining has the potential to propel the region into the take-off stage; however, excessive dependence on extractive commodities risks creating an enclave economy that hinders diversification (Todaro & Smith, 2015; Jhingan, 2016).

Furthermore, Kuznets (1971) explains that long-term growth is characterized by a structural shift from the primary sector toward the secondary and tertiary sectors. This structural transformation reflects not only productivity enhancement but also institutional change. In this regard, Konawe faces a major challenge—how the mining sector can drive downstream industrialization while simultaneously strengthening agriculture so that it does not remain merely a subsistence support system. Chenery and Syrquin (1975) assert that without structural transformation, regions risk being trapped in stagnation. Similarly, Lewis (1954) emphasizes the importance of labor shifts from the primary sector to more productive modern sectors, although this process is often accompanied by inequality risks, as described by the Kuznets Curve.

The growth pole theory proposed by François Perroux in the 1950s emphasizes that economic development is inherently uneven, being concentrated in specific growth centers that subsequently generate spread effects and backwash effects (Martin, 2023; Krugman, 2021). In the context of Konawe Regency, the mining sector can be viewed as a growth pole that attracts both investment and labor. However, the success of this theory depends on the extent to which the growth of the mining sector can produce positive spillover effects for agriculture, manufacturing, and local services—rather than merely strengthening an enclave economy.

The economic base theory, as described by Hoyt (1939) and Barnard (1933), asserts that regional growth is determined by basic or export sectors that generate income inflows from outside the region (Hoyt, 2022; Isard & Smith, 2021; Krugman & Venables, 2023). This external income subsequently creates multiplier effects on non-basic sectors. In the case of Konawe, nickel mining clearly functions as the basic sector; however, the success of this theory is measured by how effectively external income circulates into other sectors—such as agriculture and local enterprises—thereby fostering inclusive regional growth.

David Ricardo (1817), through his theory of comparative advantage, explains that trade benefits a region when it specializes in products with lower opportunity costs (Ricardo, 1817; Dornbusch et al., 1977; Feenstra & Taylor, 2023; Bhagwati & Srinivasan, 2022). Konawe possesses a comparative advantage in nickel mining, yet this theory also underscores the importance of balanced specialization to ensure that trade supports regional development. This implies that the mining sector must be integrated with agriculture and local industries so that the benefits of comparative advantage can be distributed more broadly.

In line with this, the regional specialization theory proposed by Marshall (1890), Lösch (1940), and Semple (1949) highlights that regions with specific advantages will develop distinctive production patterns to achieve higher efficiency and productivity as argued by regional specialization theorists (Marshall, 1890; Lösch, 1954; Semple, 1911; Glaeser, 2022; Storper, 2022). Factors such as industrial agglomeration, natural resource endowment, infrastructure, and government policy drive the formation of regional specialization. In the case of Konawe, specialization should be directed toward developing the mining sector integrated with agriculture and downstream processing, thereby establishing a strong and competitive regional economic system.

This study focuses on three main analytical aspects. First, it examines the dynamics of the economic structure of Konawe Regency from 2010 to 2024. The analysis employs the Shift Share Analysis (SSA) approach to determine the region's relative position and sectoral comparative advantages at the national level through the decomposition of the national growth effect, proportional shift, and differential shift components.

Second, this study analyzes the dynamics of sectoral repositioning (basic and leading sectors) within the economic structure of Konawe Regency from 2010 to 2024. The analysis employs the Dynamic Location Quotient (DLQ) method to identify sectoral changes or repositioning over time, thereby revealing whether a sector that was previously classified as a basic sector in a given period may become non-basic, and vice versa.

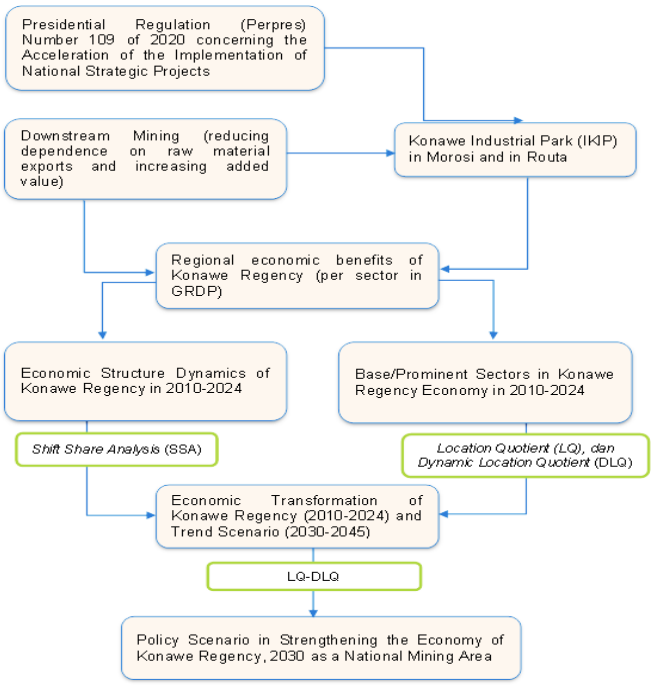
Presidential Regulation (Perpres) Number 109 of 2020 concerning the Acceleration of the Implementation of National Strategic Projects
Downstream Mining (reducing dependence on raw material exports and increasing added value)
Konawe Industrial Park (IKIP) in Morosi and in Routa
Regional economic benefits of Konawe Regency (per sector in GRDP)
Economic Structure Dynamics of Konawe Regency in 2010-2024
Base/Prominent Sectors in Konawe Regency Economy in 2010-2024
Shift Share Analysis (SSA)
Location Quotient (LQ), dan Dynamic Location Quotient (DLQ)
Economic Transformation of Konawe Regency (2010-2024) and Trend Scenario (2030-2045)
LQ-DLQ
Policy Scenario in Strengthening the Economy of Konawe Regency, 2030 as a National Mining Area

Figure 3. Research Framework.

Third, this research aims to formulate a sectoral development policy scenario model to strengthen the economic structure of Konawe Regency by 2030, as part of the national mining corridor. The analysis used to support this scenario formulation is based on the DLQ (derived from LQ results), which enables the identification of relative and dynamic sources of sectoral growth.

The resulting policy model is expected to serve as a reference for designing long-term regional economic development strategies that emphasize not only growth, but also equity, sustainability, and structural resilience. This effort aligns with Indonesia's national development vision, "Indonesia Emas 2045," which aspires to realize Indonesia as a sovereign, just, and prosperous advanced nation, capable of empowering all regions through the strengthening of regional comparative advantages.

MATERIALS AND METHODS

This study employs a quantitative descriptive design, which is considered the most relevant approach for analyzing regional economic data, particularly Gross Regional Domestic Product (GRDP). Common research types include qualitative, quantitative, mixed methods, and developmental approaches, each with distinct characteristics depending on their objectives and data sources. In this context, a quantitative descriptive approach was selected as it aligns with the research objective—presenting and analyzing numerical GRDP data without hypothesis testing (Sugiyono, 2016; Creswell, 2014; Ary et al., 2014; Field, 2013; Kerlinger & Lee, 2000). Quantitative descriptive research aims to describe phenomena objectively and systematically, focusing on analysis that does not test causal hypotheses (Sekaran & Bougie, 2016; Creswell, 2014; Neuman, 2014). Therefore, this design is appropriate for presenting regional economic data in an informative and structured manner.

The research location is Konawe Regency, Southeast Sulawesi Province, selected purposively based on three considerations: (1) Konawe Regency has been designated as a national strategic area for mining downstreaming under Presidential Regulation No. 109 of 2020, particularly through the Konawe Industrial Park (IKIP) in Morosi and Routa; (2) there are dynamic changes in sectoral contribution distribution, indicating the emergence of structural disparities within the GRDP; and (3) there has been no recent comprehensive study examining the structure and economic development of this region. The research was conducted over a five-month period, from December 2024 to April 2025, encompassing proposal preparation, data collection, analysis, and report writing stages.

The research variables are grouped into three main focuses: First, the economic dynamics within the GRDP structure of Konawe Regency from 2010 to 2024, analyzed through

Table 1. Comparison of Sectoral Competitiveness (Cij) Konawe Regency 2010-2014 with 2014-2019.

No.	Economic Sector	Cij 2010-2014	Cij 2014-2019	Change in Cij
1	Agriculture, Forestry and Fisheries	6.454	17.780	+11.326
2	Mining and Quarrying	-8.607	0.000	+8.607
3	Processing Industry	7.024	10.285	+3.261
4	Electricity and Gas Procurement	131.000	21.000	-110.000
5	Water Supply, Waste Management, Waste and Recycling	169.000	12.000	-157.000
6	Construction	2.168	-3.947	-6.115
7	Wholesale and Retail Trade	17.476	6.340	-11.136
8	Transport and Warehousing	-2.122	506.000	+2.628
9	Provision of Accommodation and Meals	-161.000	140.000	+301.000
10	Information and Communication	383.000	-10.000	-393.000
11	Financial and Insurance Services	1.581	-548.000	-2.129
12	Real Estate	6.002	-591.000	-6.593
13	Corporate Services	5.000	30.000	+25.000
14	Government Administration, Defence and Compulsory Social Security	2.453	4.383	+1.930
15	Education Services	3.488	793.000	-2.695
16	Health and Social Services	861.000	23.000	-838.000
17	Other services	421.000	80.000	-341.000

Table 2. The complete results of the SSA of Konawe Regency against Southeast Sulawesi Province in the 2019-2024 period.

No.	Sector	Eij 2019	Eij 2024	Δ PDRB (Dij)	Provincial Effect (Nij)	Mix Effect (Mij)	Competitive Effect (Cij)
1	Agriculture	1,773,940	1,947,220	173,280	95,792.76	-27,496.07	45,590.26
2	Mining	838,640	790,370	-48,270	45,286.56	7,044.58	-87,973.34
3	Processing Industry	1,136,680	6,250,750	5,114,070	61,380.72	86,160.34	74,907.21
4	Electricity and Gas	2,980	3,820	840	160.92	-73.61	-36.06
5	Water and Waste	6,860	6,560	-300	370.44	-445.90	3.43
6	Construction	853,070	892,920	39,850	46,065.78	-22,435.74	25,677.41
7	Trade	728,800	897,100	168,300	39,355.20	-12,316.72	22,957.20
8	Transport	90,360	92,370	2,010	4,879.44	-984.92	-126.50
9	Accommodation and Dining	34,130	39,690	5,560	1,843.02	-395.91	-1,242.33
10	Information and Communication	69,580	86,740	17,160	3,757.32	1,676.88	340.94
11	Finance and Insurance	102,530	123,550	21,020	5,536.62	-5,505.86	2,255.66
12	Real Estate	145,460	151,310	5,850	7,854.84	-1,527.33	-4,218.34
13	Corporate Services	10,200	11,020	820	550.80	180.54	-754.80
14	Government Administration	552,590	654,990	102,400	29,839.86	36,360.42	14,035.79
15	Education	377,380	422,700	45,320	20,378.52	-5,547.49	-2,717.14
16	Health	98,360	116,390	18,030	5,311.44	-59.02	-2,262.28
17	Other services	83,210	86,360	3,150	4,493.34	-2,271.63	274.59

sectoral growth, GRDP by industry, and sectoral contribution distribution using constant price data (ADHK 2010). Second, the basic and leading sectors within Konawe's GRDP structure from 2010 to 2024, measured using the Location Quotient (LQ), Dynamic Location Quotient (DLQ), and Shift-Share Analysis (SSA) to identify changes in sectoral competitiveness.

Third, the formulation of a sectoral development policy scenario model for Konawe Regency toward 2045, designed using an economic foresight approach to project long-term policy directions based on downstreaming, sectoral

Table 3. Comparison of Sectoral Competitiveness (Cij) of Konawe Regency 2010-2014; 2014-2019; and 2019-2024.

No.	Sector	Cij 2010-2014	Cij 2014-2019	Cij 2019-2024	Technical Classification
1	Agriculture	6,454.40	17,780.00	45,590.26	Consistent Increase
2	Mining	-8,606.70	0.00	-87,973.34	Decline Continues
3	Processing Industry	7,024.20	10,285.00	74,907.21	Consistent Increase
4	Electricity and Gas	131.20	21.00	-36.06	Recent Drops
5	Water and Waste	169.10	12.00	3.43	Recent Drops
6	Construction	2,167.70	-3,947.00	25,677.41	Fluctuating
7	Trade	17,475.90	6,340.00	22,957.20	Fluctuating
8	Transport	-2,121.60	506.00	-126.50	Fluctuating
9	Accommodation and Dining	-161.10	140.00	-1,242.33	Fluctuating
10	Information and Communication	383.40	-10.00	340.94	Fluctuating
11	Finance and Insurance	1,581.10	-548.00	2,255.66	Fluctuating
12	Real Estate	6,001.70	-591.00	-4,218.34	Decline Continues
13	Corporate Services	5.20	30.00	-754.80	Decline Continues
14	Government Administration	2,453.00	4,383.00	14,035.79	Consistent Increase
15	Education	3,487.60	793.00	-2,717.14	Recent Drops
16	Health	861.30	23.00	-2,262.28	Recent Drops
17	Other services	420.90	80.00	274.59	Fluctuating

integration, and local resource capacity (Sugiyono, 2017; Creswell, 2012).

The type of data used in this study is secondary data obtained from official statistical reports, particularly publications from the Central Bureau of Statistics (BPS) of Konawe Regency, such as Gross Regional Domestic Product of Konawe Regency by Industrial Origin 2019-2023 (BPS Konawe, 2024). Secondary data were chosen because they are more time- and cost-efficient, while also enabling a comprehensive analysis (Sekaran & Bougie, 2016; Creswell, 2014). Based on the time variation, this research employs time-series data from 2010-2024, which are relevant for analyzing trends, patterns, and fluctuations in economic variables, as well as for long-term forecasting up to 2039. According to reports, time-series data are used for forecasting, trend identification, seasonality analysis, and understanding differences in economic growth across periods.

The data collection techniques in this study involve secondary data compilation and documentation. Secondary data include official BPS reports, statistical publications, and archives relevant to regional GRDP (Sekaran, 2006). Meanwhile, documentation is carried out by reviewing written records such as Gross Regional Domestic Product of Konawe Regency by Industrial Origin 2010-2024, published by BPS Konawe (Moleong, 2017).

The data analysis is conducted using three main techniques. First, Shift Share Analysis (SSA) is employed to analyze the changes in Konawe's economic structure relative to that of Southeast Sulawesi Province, using the proportional shift (Mij) and competitive shift (Cij) components to measure sectoral shifts. Second, the Location Quotient (LQ) method is applied to identify basic sectors (LQ > 1) and non-basic sectors (LQ ≤ 1) within the regional GRDP structure (Alwi et al., 2024).

Third, the Dynamic Location Quotient (DLQ) is used to evaluate sectoral competitiveness over time, using the formula DLQt1-t2 = LQt2 / LQt1, to determine whether a sector has strengthened, weakened, or transitioned from non-basic to basic. The DLQ analysis is considered more applicable and interpretative in providing contextual sectoral policy directions (Amstrong & Taylor, 2000; Tarigan, 2005).

RESULTS

The following is data on the development of Konawe Regency GRDP in 2010-2024.

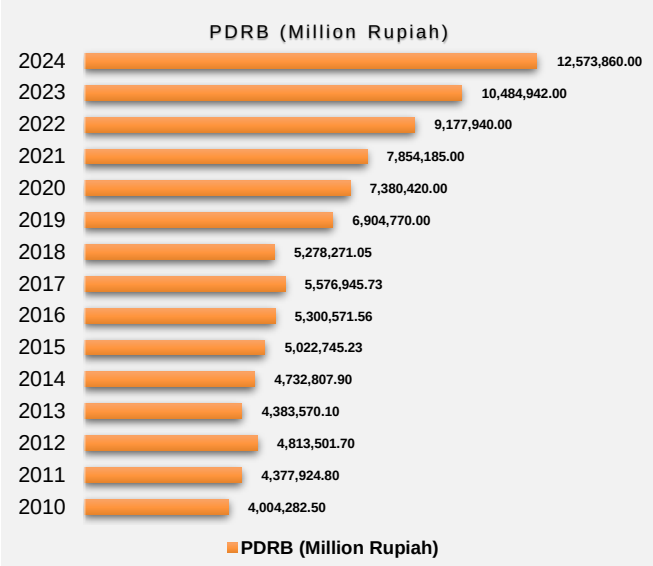

Figure 4. Total GRDP of Konawe Regency in 2010-2024.

The following Infographic research results of the development of economic growth in Konawe Regency during 2010-2024 are presented in Figure 5.

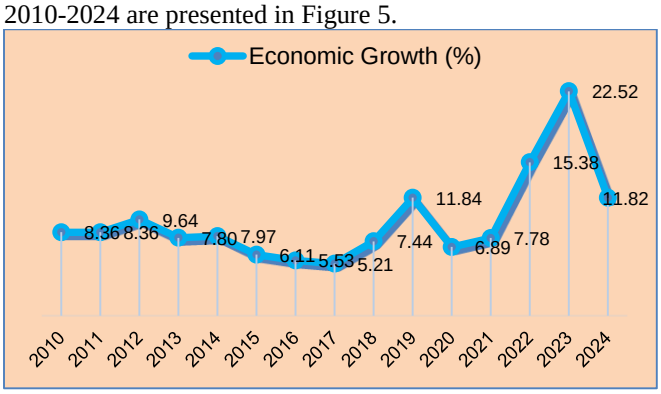

Figure 5. Economic Growth of Konawe Regency in 2010-2024

The relationship between Gross Regional Domestic Product (GRDP) and economic growth demonstrates a synergistic linkage, although it does not always move in direct proportion. There are five (5) key points that explain this interrelation.

First, the relationship between GRDP and economic growth is synergistic but not perfectly proportional. There is often a time lag between increases in investment (reflected in GRDP) and the real output response in the form of accelerated economic growth. Second, GRDP, as a nominal indicator, reflects the accumulation of output value, while economic growth, as a dynamic indicator, represents the rate of change and efficiency of output transformation over time. In the case of Konawe, GRDP values exhibit relatively stable growth, whereas the growth rate reflects cyclical fluctuations and the impact of structural policies.

Third, structural transformation serves as a turning point, with the year 2020 marking the inflection point where the economy transitioned from a primary-based to a secondary-based (manufacturing) structure. Since this point, both GRDP and economic growth have shown a consistent positive direction.

Fourth, sectoral dependency risks have begun to emerge due to the concentration of economic activities in the metal industry. This dependency makes the economy vulnerable to global fluctuations and highlights the need for economic diversification policies based on sectoral GRDP contributions.

Finally, future development planning must integrate the qualitative dimensions of growth, including the spatial and sectoral distribution of GRDP, labor inclusivity, environmental and social sustainability, and the strengthening of supporting economic sectors such as MSMEs, services, and logistics.

***Sectoral Shift Share Analysis (SSA) of Konawe Regency, 2010-2024*:** A comparative Shift Share Analysis (SSA) of the sectoral economic structure of Konawe Regency over two periods—2010-2014 and 2014-2019—reveals several key findings that reflect the dynamics and direction of the region's economic transformation.

First, based on the total change in sectoral GRDP values (ΔPDRB or Dij), there is a visible shift in growth trends among major sectors. The manufacturing industry recorded a significant increase in ΔGRDP from IDR 79,289 million to IDR 138,404 million, indicating an acceleration of the secondary sector's contribution to the regional economy. A similar trend is observed in the wholesale and retail trade sector, which remained relatively stable, and in the education services sector, which showed moderate growth from IDR 78,420 million to IDR 83,060 million. Conversely, the agricultural sector, which initially experienced a contraction in the early period (ΔGRDP of -IDR 54,996 million), saw rapid growth to IDR 292,283 million, while the mining sector experienced a sharp slowdown from IDR 215,247 million to only IDR 15,981 million.

Second, when viewed from the composition of SSA components, the provincial growth effect (Nij) remains the dominant driver of sectoral growth in most sectors. However, a notable shift is observed in the contribution of the local competitive effect (Cij). For instance, the manufacturing sector showed an increase in Cij from IDR 7,024 million to IDR 10,285 million, indicating the emergence of local competitive advantages, possibly driven by the initial operation of the Morosi Industrial Zone. The trade sector maintained its competitive position despite a decline in Cij from IDR 17,476 million to IDR 6,340 million. Meanwhile, although the agricultural sector experienced significant value growth, its Cij remained weak and stagnant, reflecting that its

expansion has not yet been supported by local innovation, efficiency, or productivity advantages.

Third, the dynamics of changes in competitive advantage status among sectors can be observed through the comparison of Cij values between the two periods, as presented in Table 5.9, which shows changes in sectoral competitiveness from 2010-2014 to 2014-2019, along with the magnitude of those changes. Fourth, these findings collectively provide a solid foundation for formulating a more focused regional economic development policy, emphasizing the strengthening of sectoral competitiveness based on local potential, while reducing dependency on broader regional growth trends.

The comparative analysis of the competitive effect (Cij) between periods, as shown in Table 5.9, indicates significant structural shifts in sectoral competitiveness in Konawe Regency. Some sectors experienced an increase in local competitive advantage—reflected by rising Cij values—while others showed stagnation or decline. The increase in Cij signifies improvements in relative efficiency, enhanced local production capacity, and the positive impact of targeted sectoral development policies.

First, the sectors that recorded an increase in local competitiveness include agriculture, forestry, and fisheries, with a rise in Cij value of IDR 11,326 million. Although this sector remains highly dependent on the overall provincial growth, the increase reflects the emergence of enhanced local productivity and the potential impact of region-based policy support. The manufacturing sector also experienced an increase in Cij by IDR 3,261 million, reinforcing its role as the new engine of regional economic growth, particularly following the operation of the Morosi Industrial Zone toward the late 2010s. In addition, the transportation and warehousing sector and the accommodation and food services sector exhibited a notable shift in status—from non-competitive (negative Cij) to competitive (positive Cij)—reflecting the growth of supporting service sectors in response to the expansion of productive industries and rising local economic mobility.

Second, several sectors experienced a decline in local competitiveness. For instance, the wholesale and retail trade sector showed a decrease in Cij of IDR 11,136 million, although it remained positive—indicating stagnation in innovation, distribution efficiency, or domestic market absorption. The real estate and financial services sectors, both classified as modern service sectors, shifted from positive to negative Cij values, signaling a loss of local competitive advantage and possibly reflecting weak regulatory or institutional support at the regional level. The construction sector also experienced a shift from positive to negative Cij of -IDR 6,115 million, likely due to the dominance of large-scale projects managed by external actors (national or central government contractors), rather than by local firms or resources.

Third, several sectors demonstrated relatively stable competitiveness or only minimal change. The business services, public administration, and other service sectors maintained Cij values within the positive range, though without significant growth. This stability indicates that these sectors continue to play a supportive role in sustaining the region's socio-economic activities but have yet to experience major productivity leaps or structural transformation.

However, several sectors still exhibit a high dependence on external structures, particularly mining, financial services, and real estate. Therefore, localized sectoral policies are required to: 1) Promote industrial downstream investment and diversify local products; 2) Enhance agricultural integration with agro-industrial development; and 3) Develop an inclusive MSME and industrial support service ecosystem to strengthen local economic resilience and competitiveness.

The Shift Share Analysis (SSA) results indicate that the sectoral economic growth dynamics of Konawe Regency over the past five years (2019-2024) have been shaped by a complex combination of provincial growth effects, regional industrial structure, and local competitive strength. This period represents a phase of accelerated structural transformation, driven primarily by the full operation of the Morosi Industrial Zone and the post-COVID-19 economic consolidation efforts. Both factors have served as major catalysts for the emergence of new patterns in the distribution of growth and sectoral competitiveness at the local level.

Furthermore, the SSA results for Konawe Regency compared to Southeast Sulawesi Province during this period reveal four key insights that illustrate the evolving dynamics of sectoral competitiveness. First, certain sectors exhibit strong competitive advantages, as indicated by large and positive competitive effect (Cij) values, reflecting internal efficiency and productive capacity that serve as the foundation of local economic growth. Second, several sectors show signs of improving competitiveness, with rising Cij values compared to the previous period, suggesting that structural adaptation processes have begun to take effect. Third, there remain sectors with weakening competitiveness, as indicated by negative Cij values, pointing to a decline in relative efficiency or growing competitive pressure from other sectors or external regions. Fourth, several service sectors demonstrate neutral or minimal contributions to regional competitiveness, with stagnant or low Cij values—indicating that these sectors have yet to become key drivers of local economic growth.

Sectors with strong competitive advantages are characterized by competitive share (Cij) values that are not only positive but also relatively large, reflecting absolute growth accompanied by increasing local competitiveness. One of the most prominent examples is the manufacturing sector, which recorded an exceptional surge in Cij of IDR 74.91 billion, with total PDRB (Dij) growth reaching IDR 5.11 trillion. This reflects a significant structural transformation toward a downstream, value-added industrial economy, particularly in

metal processing, which has become the backbone of regional industrialization. In addition, the public administration and construction sectors also show strong positive Cij values of IDR 14.03 billion and IDR 25.68 billion, respectively. These performances indicate improved public governance capacity and the strengthening of the construction sector as key infrastructure support for industrial growth. The combination of absolute growth and strong competitiveness suggests that these three sectors play a strategic role in driving sustainable regional economic development.

Meanwhile, sectors that show improving competitiveness are marked by positive Cij values, although not yet fully supported by provincial-level structural changes. For instance, the agriculture sector recorded a Cij value of IDR 45.59 billion, despite having a negative mix industry share (Mij) value. This indicates internal efficiency improvements and strengthened local capacity within agriculture, independent of external pressures or provincial sectoral growth trends. On the other hand, service sectors such as trade, information and communication, and finance and insurance also exhibit positive Cij values, reflecting the emergence of adaptive and responsive supporting industries in line with industrial expansion and increased local consumption, as well as the growing importance of the tertiary sector in supporting regional economic transformation.

Furthermore, sectors with declining competitiveness are identified by negative Cij values, indicating a loss of local advantage even though nominal growth persists in some cases. The mining sector serves as the most notable example, recording the lowest Cij value of -IDR 87.97 billion. This reflects a significant structural downturn, as the sector becomes increasingly marginalized amid the policy shift toward industrial downstreaming and manufacturing development.

Additionally, sectors such as education, health, and real estate also display negative Cij values. Although their PDRB figures continue to grow, this growth does not yet translate into strong efficiency or local competitiveness. This underscores the need for targeted policy interventions to enhance service quality and improve the effectiveness of these sectors in supporting comprehensive regional development.

Finally, the service sectors with neutral or minimal contributions are indicated by relatively small or even negative competitive share (Cij) values, reflecting their non-strategic position within the local competitiveness structure. The transportation, accommodation, and business services sectors fall into this category, with performance that tends to follow external dynamics rather than exhibit distinctive competitive advantages. Although these sectors continue to grow, their roles remain reactive and have yet to evolve into primary drivers of regional economic development. This highlights the need for strategies to strengthen the service sector so that it can transform into an independent and sustainable engine of growth, particularly in supporting mobility, tourism, and industrial activities.

***Comparison of Competitiveness (Competitive Effect/Cij) of Konawe Regency 2010-2014; 2014-2019; and 2019-2024*:**

Table 3 presents a summary of the Cij values for 17 economic sectors in Konawe Regency across three analysis periods. This table serves as the basis for further examination of sectors that consistently demonstrate competitiveness, experience stagnation, or show a decline in their competitive performance over time.

To complement the understanding of the longitudinal dynamics of sectoral competitiveness, the line graph presented in Figure 5.5 illustrates the pattern of changes in the competitive effect (Cij) values for each sector from 2010 to 2024. The graph maps the movement of sectoral competitiveness at the midpoint of each analysis period (2012, 2017, and 2022), representing the five-year intervals of 2010-2014, 2014-2019, and 2019-2024.

Four main patterns were identified from the comparison of sectoral competitiveness (Cij) in Konawe Regency between the periods 2010-2014 and 2014-2019. First, sectors with consistent and increasing competitiveness include the manufacturing industry, public administration, and agriculture. These three sectors exhibited positive and continuously rising competitive advantage (Cij) values from 2010 to 2024. The manufacturing sector experienced a significant surge, particularly during 2019-2024, driven by the success of downstreaming policies and the development of the Morosi Industrial Zone. The public administration sector grew steadily, reflecting the strategic role of government in supporting regional economic transition, while the agricultural sector maintained strong competitiveness despite external pressures, indicating its adaptive capacity to structural changes in regional development.

Table 4. Identification of Base and Non-Base Sectors in Konawe Regency based on Location Quotient (LQ) Value, 2010-2024.

No.	Sectoral	Konawe (V_1^R / V^R)				Southeast Sulawesi (V_1 / V)				Value LQ (V_1^R / V^R)/(V_1 / V)			
		2010	2014	2019	2024	2010	2014	2019	2024	2010	2014	2019	2024
1	Agriculture, Forestry and Fisheries	0.384	0.313	0.257	0.155	0.262	0.248	0.229	0.226	1.467	1.261	1.120	0.686
2	Mining and Quarrying	0.101	0.131	0.121	0.063	0.200	0.205	0.211	0.19	0.505	0.638	0.576	0.331
3	Ind Processing Industry ustri Pengolahan	0.048	0.057	0.165	0.497	0.066	0.06	0.065	0.093	0.726	0.948	2.543	5.333
4	Electricity and Gas Procurement	0	0	0	0	0	0.001	0.001	0.001	0.826	0.904	0.854	0.581
5	Water Supply, Waste Management, Waste and Recycling	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.600	0.604	0.545	0.322
6	Construction	0.122	0.130	0.124	0.071	0.115	0.123	0.129	0.119	1.065	1.056	0.961	0.597
7	Wholesale and Retail Trade; Repair of Cars and Motorcycles	0.088	0.105	0.106	0.071	0.116	0.12	0.128	0.13	0.763	0.873	0.827	0.55
8	Transport and Warehousing	0.012	0.013	0.013	0.007	0.045	0.044	0.047	0.044	0.276	0.300	0.280	0.166
9	Provision of Accommodation and Meals	0.004	0.005	0.005	0.003	0.006	0.006	0.006	0.006	0.683	0.866	0.861	0.560
10	Information and Communication	0.009	0.010	0.010	0.007	0.022	0.023	0.025	0.029	0.398	0.424	0.405	0.241
11	Financial and Insurance Services	0.010	0.015	0.015	0.010	0.019	0.022	0.022	0.022	0.507	0.719	0.670	0.445
12	Real Estate	0.023	0.026	0.021	0.012	0.019	0.017	0.015	0.013	1.250	1.512	1.435	0.894
13	Corporate Services	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.635	0.710	0.702	0.407
14	Government Administration, Defence and Compulsory Social Security	0.120	0.102	0.08	0.052	0.06	0.056	0.049	0.052	2.003	1.817	1.638	1
15	Education Services	0.052	0.060	0.055	0.034	0.045	0.047	0.048	0.048	1.162	1.280	1.148	0.696
16	Health and Social Services	0.013	0.016	0.014	0.009	0.009	0.01	0.01	0.01	1.415	1.602	1.460	0.913
17	Other services	0.011	0.014	0.012	0.007	0.014	0.015	0.014	0.014	0.781	0.948	0.861	0.502

Notes: LQ > 1 (including 1.001) is categorised as a basic sector, and LQ ≤ 1 (including 0.999) is categorised as non-basic

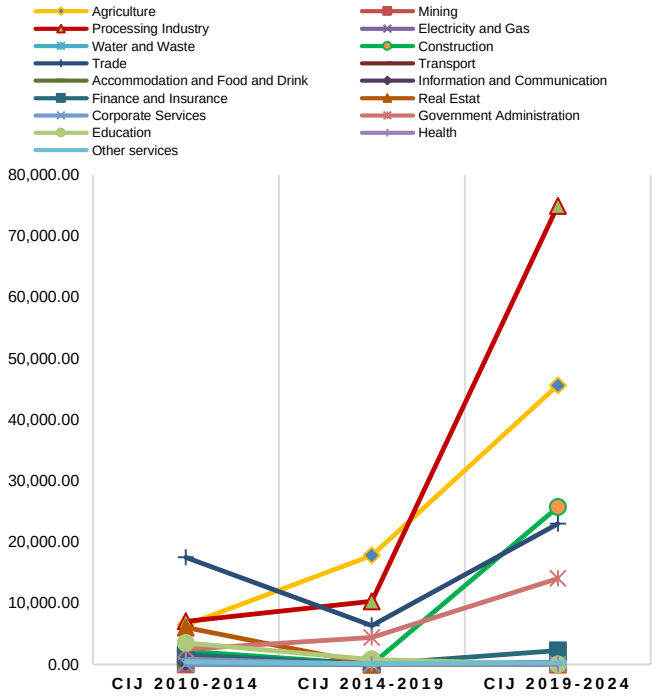

Figure 6. Visualisation of the Trend Line Graph of Sectoral Competitiveness (Cij) of Konawe Regency for Three Five-Year Periods (2010-2024)

Second, sectors with fluctuating patterns showed unstable shifts in competitiveness across periods, reflecting dynamic responses to structural transformations and external conditions. The trade sector demonstrated high flexibility, with Cij values fluctuating in line with consumption trends and external economic dynamics. The construction sector shifted from positive to negative and back to positive competitiveness, illustrating its dependence on physical investment cycles and development policies. Meanwhile, the financial and insurance sector and the information and communication sector showed promising growth potential but remained unstable. These fluctuations indicate that the sustainability of their competitiveness relies heavily on infrastructure support, digitalization policies, macroeconomic stability, and the effectiveness of inclusive financial programs.

Third, sectors experiencing declining competitiveness were characterized by a shift in Cij values from positive to negative, reflecting their inability to adapt to structural changes and medium-term development needs. The mining sector faced the sharpest decline as the economy shifted from extractive activities toward industrial downstreaming. The real estate and education sectors also declined due to weak

Table 5. Results of Analysis of Changes in Competitiveness (DLQ) of Sectoral Economies of Konawe Regency, 2010-2024.

No.	Sector	DLQ 2010-2014	DLQ 2014-2019	DLQ 2019-2024
1	Agriculture, Forestry and Fisheries	0.859	0.888	0.613
2	Mining and Quarrying	1.263	0.903	0.574
3	Ind Processing Industry ustri Pengolahan	1.306	2.681	2.096
4	Electricity and Gas Procurement	1.095	0.944	0.680
5	Water Supply, Waste Management, Waste and Recycling	1.007	0.902	0.591
6	Construction	0.992	0.910	0.621
7	Wholesale and Retail Trade; Repair of Cars and Motorcycles	1.144	0.947	0.665
8	Transport and Warehousing	1.087	0.933	0.593
9	Provision of Accommodation and Meals	1.268	0.995	0.651
10	Information and Communication	1.065	0.955	0.595
11	Financial and Insurance Services	1.417	0.932	0.664
12	Real Estate	1.210	0.949	0.623
13	Corporate Services	1.181	0.989	0.580
14	Government Administration, Defence and Compulsory Social Security	0.907	0.901	0.611
15	Education Services	1.102	0.897	0.606
16	Health and Social Services	1.132	0.911	0.625
17	Other services	1.214	0.908	0.583

institutional support, a mismatch between educational outputs and industrial needs, and suboptimal spatial planning reforms. The business services sector has yet to evolve as a provider of professional services based on local competencies, while the health sector suffered a significant drop due to the impacts of the pandemic, limited regional fiscal capacity, and inefficiencies in service systems. Overall, these sectors require strategic interventions through strengthened sectoral policies, improved human resource quality, public governance reform, and cross-sectoral synergy to restore their contribution to regional competitiveness and sustainable economic growth.

Finally, sectors with weak or neutral competitiveness were identified by low and stagnant Cij values across all three periods. The accommodation and food service, transportation, and other service sectors showed weak competitiveness despite moderate growth, indicating the need to develop more productive tourism value chains and supporting services. Meanwhile, the water and waste management as well as electricity and gas sectors continued to function as essential infrastructure without a significant increase in their contribution to regional competitiveness. Overall, these sectors serve more as supportive elements rather than primary growth drivers, highlighting the need for strategies to strengthen their productivity and structural role within the regional economy.

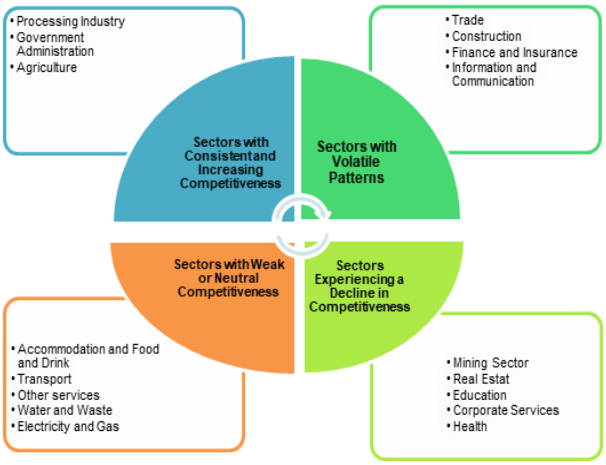

Figure 7. Sectoral Competitiveness Classification (Cij) of Konawe Regency Based on Shift Share Analysis: 2010-2014, 2014-2019, and 2019-2024

***Base/Prominent Sectors in Konawe Regency Economy, 2010-2024 (LQ Analysis)*:** The results of the Location Quotient (LQ) analysis, which illustrate the base sectors of Konawe Regency's economy for each observation year—2010, 2014, 2019, and 2024—are presented in Table 4. This presentation aims to empirically demonstrate both the consistently leading sectors and those that have experienced status changes within the regional economic structure over the analyzed period.

Based on the results of the LQ analysis for the period 2010-2024 presented in Table 4, there are seven economic sectors that, at some point, have held base-sector status in Konawe

Regency. These include the Agriculture, Forestry, and Fisheries sector; Manufacturing Industry; Construction; Real Estate; Public Administration, Defense, and Mandatory Social Security; Education Services; and Health and Social Activities sectors—all of which demonstrate significant structural dynamics over the past fifteen years.

***DLQ Calculation Results by Sector (2010-2024)*:** The DLQ calculation results are presented in Table 5, which serves as the basis for identifying sectors with consistent, declining, or fluctuating competitiveness transformation trends, as well as a preliminary reference for projecting sectoral trends toward 2045. The DLQ analysis results for the 17 economic sectors of Konawe Regency show varying directions of sectoral competitiveness transformation. As a ratio of inter-period LQ values, DLQ reflects changes in the relative structural strength of regional sectors compared to the provincial level. From these results, three main patterns can be identified: 1) Sectors with consistently increasing competitiveness; 2) Sectors with fluctuating or inconsistent competitiveness; and 3) Sectors with consistently declining competitiveness.

In the context of Konawe Regency, only the Manufacturing Industry sector meets the criteria for consistent competitiveness growth, with DLQ values of 1.306 in 2010-2014, 2.681 in 2014-2019, and 2.096 in 2019-2024. This consistent upward trend indicates that the manufacturing sector has become the main driver of the region's economic transformation, moving away from dependence on primary sectors toward a value-added and downstream-oriented economy. This phenomenon is directly linked to the development of the Morosi Industrial Zone, which serves as a national and international nickel and metal processing hub in eastern Indonesia. The influx of large-scale investment into this area has created vertical integration between the mining and local manufacturing sectors, thereby strengthening the regional economic structure and expanding its competitive base.

Interpretively, this consistent rise in DLQ not only reflects absolute sectoral advantages but also signifies that the growth rate of Konawe's manufacturing sector has outpaced the provincial average. Consequently, this sector stands as the primary candidate to be further promoted as the backbone of the region's long-term economy and should be prioritized in strategic development planning, both within the framework of Konawe's Regional Medium-Term Development Plan (RPJMD) and in alignment with Indonesia's Vision 2045.

Several sectors have experienced a consistent decline in relative competitiveness over the three projection periods. For instance, the Mining and Quarrying sector recorded a decrease in its DLQ value from 1.263 (first period) to 0.903 (second period), and continued to drop to 0.574 (third period). The Accommodation and Food Service sector also experienced a decline (DLQ 1.268 → 0.995 → 0.651), reflecting adjustments in its contribution to the regional economic structure. A similar downward trend occurred in Financial and Insurance Services (DLQ 1.417 → 0.932 → 0.664), Other Services (1.214 → 0.908 → 0.583), and Trade and Repair (1.144 → 0.947 → 0.665). The Real Estate sector also showed a weakening trend (DLQ 1.210 → 0.949 → 0.623), despite previously being one of the sectors with strong contributions.

Furthermore, the Business Services sector (DLQ 1.181 → 0.989 → 0.580), Information and Communication (1.065 → 0.955 → 0.595), and utility sectors such as Electricity and Gas Supply (1.095 → 0.944 → 0.680) and Water Supply, Waste

Table 6. Projected (Scenario) Trend of LQ Value of Konawe Regency Economy for 2030, 2035, 2040, and 2045.

No.	Sektor	*LQ 2024	LQ 2030	LQ 2035	LQ 2040	LQ 2045
1	Agriculture, Forestry and Fisheries	0.686	0.540	0.425	0.334	0.263
2	Mining and Quarrying	0.331	0.302	0.276	0.252	0.230
3	Ind Processing Industry ustri Pengolahan	5.333	10.814	21.926	44.459	90.148
4	Electricity and Gas Procurement	0.581	0.527	0.477	0.433	0.392
5	Water Supply, Waste Management, Waste and Recycling	0.322	0.268	0.224	0.186	0.155
6	Construction	0.597	0.502	0.422	0.355	0.299
7	Wholesale and Retail Trade; Repair of Cars and Motorcycles	0.550	0.505	0.464	0.426	0.392
8	Transport and Warehousing	0.166	0.145	0.126	0.110	0.096
9	Provision of Accommodation and Meals	0.560	0.544	0.528	0.513	0.498
10	Information and Communication	0.241	0.210	0.183	0.160	0.139
11	Financial and Insurance Services	0.445	0.447	0.449	0.451	0.453
12	Real Estate	0.894	0.829	0.769	0.713	0.661
13	Corporate Services	0.407	0.373	0.342	0.313	0.287
14	Government Administration, Defence and Compulsory Social Security	1.000	0.806	0.650	0.524	0.423
15	Education Services	0.696	0.604	0.525	0.456	0.396
16	Health and Social Services	0.913	0.812	0.722	0.642	0.571
17	Other services	0.502	0.453	0.408	0.368	0.332

Management, and Recycling (1.007 → 0.902 → 0.591) also experienced gradual declines. Even the Transportation and Warehousing sector, which should function as the logistical backbone of industrialization, recorded a deterioration in its DLQ value (1.087 → 0.933 → 0.593), indicating challenges in supporting supply chain efficiency.

This pattern suggests that these sectors initially built relative advantages at the beginning of the decade but lacked sufficient foundations to sustain their competitive growth. The early rise was likely influenced by cyclical dynamics such as consumption expansion, infrastructure development, or temporary policy impacts that were not sustained systemically. Some key sectors—such as Mining, Trade, Finance, and Transportation—which should have strategic roles in supporting connectivity and investment, have shown a notable decline in relative competitiveness. This may be attributed to weak local institutional frameworks, limited follow-up investment, or dependence on external factors such as global markets and central government policies.

This fluctuating trend serves as an important signal that these sectors require more sustainable structural policy interventions. Such interventions should include strengthening supporting ecosystems like logistics and digital infrastructure, improving human resource capacity, and reforming governance and institutional systems to enhance long-term sectoral resilience and competitiveness. Without adequate policy responses, these sectors risk losing momentum and could even become sources of structural inequality within Konawe Regency's economy.

This category includes sectors that consistently recorded Dynamic Location Quotient (DLQ) values below 1 or experienced a progressive decline over the three analytical periods—2010-2014, 2014-2019, and 2019-2024. This pattern reflects a relative loss of competitiveness when compared to the same sectors at the provincial level in Southeast Sulawesi. Economically, this indicates sectoral structural regression, both in terms of contributions to the Gross Regional Domestic Product (GRDP) and functional roles within the regional economic system. Several sectors show a clear long-term downward trend in competitiveness. For example, the Public Administration sector experienced a drop in DLQ from 0.907 (initial period) to 0.901 (mid period), and then a sharper decline to 0.611 (final period). A similar pattern is seen in Education Services, which initially held a strong position with a DLQ of 1.102, but later declined to 0.897, and continued to 0.606.

The Construction sector, which was initially close to the specialization threshold (DLQ 0.992), also fell to 0.910 and then to 0.621, indicating a reduction in its contribution to the regional economic structure. The same is true for Accommodation and Food Services (DLQ 1.268 → 0.995 → 0.651) and Electricity and Gas Supply, which was initially dominant (DLQ 1.095), but later dropped to 0.944 and finally to 0.680.

Finally, the Business Services sector also experienced a decline from 1.181 to 0.989, and subsequently to 0.580, reflecting a consistent weakening trend. This pattern indicates that although these sectors once held leading positions (DLQ ≥ 1), without policy intervention and structural transformation, they risk losing their competitive advantage in the long term.

Projected (Scenario) Trend of LQ value of Konawe Regency Economy for 2030, 2035, 2040, and 2045: The projected LQ values are developed based on the average dynamic growth rate (DLQ) from the previous three periods (2010-2024), using the 2024 LQ value as the baseline. Through this exponential approach, LQ values are estimated for 2030, 2035, 2040, and 2045. This projection not only illustrates the sustainability or decline of sectoral competitiveness but also maps the potential structural transformation that could position Konawe as an epicenter of resource-based industries and regional support services. Furthermore, it serves as a crucial foundation for formulating long-term development strategies for Konawe Regency as a new growth zone, while also assessing its contribution to the national development agenda toward Indonesia Emas 2045.

The analysis of projected LQ values up to 2045 (presented in Table 6) is calculated using the average DLQ from the three previous periods (2010-2014, 2014-2019, and 2019-2024), providing insights into the long-term structural transformation trajectory of Konawe's economy. This projection is not deterministic but is structured as a trend-based scenario framework to evaluate the consistency and potential shifts in sectoral competitiveness in the future.

As shown in Table 6, the results indicate that several sectors experience significant shifts in strategic positioning, while others remain stagnant or even decline. In the context of the national development vision toward Indonesia Emas 2045, this projection offers valuable insights for designing more adaptive, evidence-based sectoral development policies.

***Trend pattern of LQ value*:** The education and health sectors, which serve as the foundation for human resource development, also show weak performance in the projected LQ trends. The LQ value of the education sector declines from 0.696 in 2024 to 0.396 in 2045, while the health sector drops from 0.913 to 0.571 over the same period. This indicates that the structural economic transformation in Konawe has not been accompanied by adequate growth in social and human capabilities.

The lag in education and health sectors suggests that local human capital has not been able to keep pace with the acceleration of physical and industrial capital, which in the long run may lead to a development paradox—high economic growth without inclusiveness or sustainability. Therefore, strengthening institutional capacity in education and health is required through cross-sectoral and industry-integrated policies.

Two service sectors—Financial and Insurance Services, and Accommodation and Food Services—show relatively stable trends during 2024-2045. The financial sector's LQ remains around 0.445-0.453, while the accommodation sector slightly decreases from 0.560 to 0.498. This stability reflects structural resilience amid the broader economic transformation. However, it also indicates limited linkage between the service sectors and the main industrial growth, highlighting the need for clearer and more effective interlinkage strategies to integrate services into industrial value chains—for example, by developing MSME-based financial services and industrial tourism. Without such efforts, these service sectors will remain marginal and undercontribute to regional economic growth.

The Government Administration, Defense, and Mandatory Social Security sector also shows no significant strengthening in LQ projections up to 2045. Although its contribution to GRDP is relatively small, this sector plays a crucial role in ensuring institutional stability, cross-sectoral development coordination, and public service effectiveness. The weak institutional strengthening in this area may create latent barriers to policy responsiveness and integration, particularly within the context of industrialization and downstreaming. The imbalance between the rapid growth of the real sector and the capacity of public governance risks creating bureaucratic inefficiency, licensing delays, and weak supervision of strategic project implementation. Therefore, strengthening public sector institutions should be an integral part of an inclusive and resilient multisectoral development strategy.

Overall, the projected LQ trend up to 2045 shows that Konawe's economy will become increasingly concentrated in the manufacturing sector as the main driver of growth. Although this reflects the success of downstreaming and industrialization, excessive dominance of a single sector without adequate support from others poses a risk of structural imbalance in the regional economy. While the industrial sector grows exponentially, most supporting sectors such as transportation, real estate, and communication experience stagnation or a decline in relative competitiveness. Likewise, social sectors such as education and health remain weak, showing no significant strengthening in their role to support human development quality.

DISCUSSION

***Base/Prominent Sectors in Konawe Regency Economy, 2010-2024 (LQ Analysis)*:** The Location Quotient (LQ) analysis results for the 2010-2024 period reveal a significant structural transformation in the economic landscape of Konawe Regency. Initially, the regional economy was driven by primary sectors such as agriculture, forestry, and fisheries, which recorded an LQ of 1.467 in 2010. However, the steady decline of this sector's LQ to 0.686 in 2024 reflects the diminishing relative contribution of agrarian activities to the regional Gross Domestic Product (GRDP). This trend signifies a process of economic de-agrarianization alongside the rising contribution of the manufacturing sector, whose LQ increased sharply from 0.726 in 2010 to 5.333 in 2024—indicating industrial deepening and an enhanced comparative advantage within the secondary sector.

This structural shift suggests that Konawe Regency is undergoing a profound economic reconfiguration—a developmental realignment from resource-based primary industries toward value-added and productivity-oriented sectors. Service sectors such as education and health, which were once foundational due to their essential role in public welfare and human capital formation, have shown a relative decline in competitiveness. This imbalance underscores potential risks of economic dualism if supporting sectors fail to grow proportionally with industrial expansion.

The transformation also reflects the success of nickel downstreaming policies and the development of the Morosi Industrial Zone as key drivers of structural change. However, these advancements bring new challenges, including the need for human capital enhancement, improved logistics infrastructure, and the mitigation of environmental and social impacts arising from rapid industrialization.

These findings reinforce the relevance of the classical structural transformation theory proposed by Kuznets (1971), which posits that long-term economic growth involves a dominant shift from agrarian to industrial and service-based sectors. In the context of Konawe, the surge in the manufacturing sector's LQ serves as a strong indicator of such a transition. Similarly, Rostow's (1960) Stages of Economic Growth model positions the take-off stage as the critical phase where industrial growth becomes the main economic driver. The manufacturing sector in Konawe not only demonstrates absolute growth but also outperforms other regions (such as those within Southeast Sulawesi Province), signifying that Konawe is currently in an industrial propulsion phase consistent with Rostow's framework.

Nevertheless, the concept of premature deindustrialization serves as a critical warning, especially as the service, education, and health sectors in Konawe show declining relative competitiveness. Without adequate local capacity—fiscal resources, skilled labor, and regulatory institutions—industrialization risks becoming an enclave economy that lacks spatial and sectoral inclusiveness. Hence, development strategies must emphasize not only economic growth but also inclusive structural transformation (McCann, 2019).

This study also aligns with Maulana et al. (2019), who highlighted LQ as a key analytical tool for identifying shifts in sectoral comparative advantage over time, particularly in the context of regional economic decentralization. Konawe exhibits a similar yet more aggressive pattern compared to other regions such as Sleman Regency (Basuki & Mujiraharjo, 2017), primarily due to the strong momentum of mining and nickel processing industries. Likewise, Afriyanti

et al. (2023), in their spatial analysis of Central Kalimantan, found that regions adjacent to industrial or mining hubs have a greater likelihood of achieving economic transformation—a dynamic also evident in Konawe, where spatial proximity to industrial centers generates strong multiplier effects on secondary sector growth.

Conversely, in contrast to Abadi et al. (2024)—who found that agriculture and fisheries remain robust base sectors in coastal regions of West Sumatra—Konawe demonstrates a clear degradation of competitiveness in those same sectors. This highlights that local context, including regional policy orientation, infrastructure quality, and natural resource governance, plays a decisive role in shaping the trajectory of structural transformation across regions.

The key policy implication of these findings is the urgent need for adaptive and evidence-based regional development strategies that respond to sectoral dynamics. On the industrial front, local governments must ensure that the growth of the manufacturing sector is not exclusive but integrated with supporting sectors such as trade, transportation, and financial services. Strengthening the industrial ecosystem—through workforce training, logistics infrastructure development, and fiscal incentives—will amplify the multiplier effects on the regional economy.

From the social perspective, the declining contribution of the education and health sectors warrants serious attention, as it threatens the long-term foundation of sustainable development. The performance of these sectors is closely tied to human capital quality and productivity. Therefore, revitalizing public social sectors through increased education spending, incentives for local professionals, and the integration of vocational curricula with industrial needs is essential.

In summary, the findings emphasize the necessity of a development approach that is not only growth-oriented but also resilience- and inclusion-oriented. Regional governments should adopt spatially differentiated economic planning based on local potential and sectoral specialization to ensure that structural transformation fosters balanced development—minimizing both horizontal disparities across sectors and vertical inequalities between industrial centers and peripheral hinterlands.

***Competitiveness Transformation and Sectoral Trend Scenario of Konawe Regency's Economy as a National Mining Area 2030 (DLQ Analysis)*:** The results of the Dynamic Location Quotient (DLQ) analysis show that Konawe Regency is undergoing significant structural transformation between 2010 and 2024, with this trend projected to continue until 2045. The manufacturing industry stands out as the only sector with a consistent strengthening pattern of competitiveness, with DLQ values of 1.306 (2010-2014), 2.681 (2014-2019), and 2.096 (2019-2024). The sector's projected LQ even surges from 5.333 in 2024 to 90.148 in 2045. These findings confirm that Konawe is entering a phase of industrial deepening and sectoral acceleration, particularly in the context of nickel downstreaming through the Morosi Industrial Zone.

However, the extreme dominance of the manufacturing sector carries the potential risk of mono-sectoral dependency. Analysis of other sectors reveals that most are experiencing a decline in relative competitiveness. The agriculture and fisheries sectors, while still playing traditional roles, show a downward trend in competitiveness, indicating the need for integrated agricultural modernization and strengthening of farmer institutions. The mining sector—ironically, the source of raw materials for manufacturing—also shows a declining DLQ and LQ trend, suggesting that future policy directions should include moratoriums on new mining permits and incentives for upstream processing.

Social sectors are experiencing significant weakening. Education and health services show declining LQ projections up to 2045, reflecting weak human capital development as the foundation for long-term growth. Strategic policies are required, such as the revitalization of vocational education (SMK) and strengthening of basic healthcare services, particularly in emerging growth zones. Other industry-supporting sectors like transportation and warehousing show stagnation in competitiveness performance, despite their crucial role in connectivity and logistics efficiency. Policy recommendations include rehabilitation of logistics access between industrial and rural zones. The same applies to finance and insurance, information and communication, and accommodation and food services, which require digital ecosystem development, rural financial inclusion, and local tourism branding based on regional competitiveness.

The construction and business services sectors also show stagnating trends. While construction remains necessary for industrial infrastructure development, future policy should prioritize strategic infrastructure projects over short-term initiatives. Meanwhile, enhancing labor capacity in business services is crucial to support the dynamics of key sectors.

Thus, Konawe's sectoral transformation up to 2030 illustrates an unbalanced transformation process, where one sector experiences extraordinary growth while others lag behind—creating structural inequality that may hinder long-term economic sustainability. Sectoral policy direction must adopt a dynamic, staged, and adaptive approach capable of bridging industrial growth with social inclusion and spatial equity. The theoretical frameworks of Rostow (2021), Romer (1990), and Lucas (1988) suggest that industrial growth marks the take-off stage but will only be sustainable if accompanied by human capital strengthening, technological innovation, and responsive institutions. Konawe is now entering this stage but must be cautious of the premature convergence trap warned by scientist, where rapid industrial growth without strong social and institutional support leads to stagnation or structural crisis.

This finding also highlights limited sectoral interlinkages, as discussed by Krugman and Venables (2023) and supported by empirical studies in other mining regions such as Kalimantan, Africa, and Brazil. The weak connection between the main industry and supporting sectors in Konawe creates a bottleneck in holistic regional economic development. Therefore, Konawe's future development strategy should not rely solely on mining downstreaming but instead involve: a) Sectoral diversification to reduce overdependence on manufacturing; b) Revitalization of social and service sectors to build an inclusive economic ecosystem; and c) Integration of spatial and sectoral planning to ensure that growth extends beyond industrial corridors to all regions of Konawe. With this approach, Konawe can evolve not only as a showcase of national downstreaming success but also as a model of resilient and sustainable resource-based regional economic transformation.

***Strategic Positioning of Konawe Regency's Economic Transformation in Supporting Indonesia's Golden Vision 2045*:** Medium-term economic transformation at the regional level plays a crucial role in laying the foundation for achieving Indonesia's Vision 2045, which aspires to position the nation as an advanced, inclusive, and sustainable country. Konawe Regency, as a strategic area for mining and nickel downstreaming in eastern Indonesia, presents an important empirical case of how resource-based industrialization can significantly transform a regional economic structure within a relatively short period.

The analysis based on Dynamic Location Quotient (DLQ) and sectoral LQ up to 2024, along with the policy direction toward 2030 (Table 5.15), indicates that Konawe is already on a transformation path toward becoming a national manufacturing hub. The manufacturing sector serves as the locomotive of growth, with competitiveness strengthening consistently. Policy directions focusing on downstream industry consolidation, local industrial ecosystem development, and logistics infrastructure improvement reinforce Konawe's role in the national value chain—directly contributing to the "Advanced and Competitive Economy" pillar of Vision 2045.

However, the data also reveal that this transformation remains uneven. The agriculture, education, health, and transportation sectors show declining or stagnant competitiveness, signaling potential sectoral and spatial disparities. This condition aligns with Kuznets' (1971) structural dualism theory, which posits that rapid growth in the modern sector can lead to inequality if not accompanied by the strengthening of traditional sectors. Therefore, strengthening social and supporting sectors becomes a strategic step in building an inclusive and resilient regional economy, consistent with the "Equitable and Just Development" pillar of Vision 2045.

Moreover, the sectoral policy mapping based on DLQ and LQ indicators up to 2030 provides a strong foundation for the long-term regional development plan (RPJPD). This approach aligns with the evidence-based regional policy framework, emphasizing the importance of integrating sectoral data, institutional reform, and investment priorities guided by competitiveness trends. With comprehensive sectoral data and clearly defined policy trajectories, Konawe is strategically positioned to become a model of evidence-based regional economic planning toward 2045.

Thus, although this study's time horizon extends only to 2030, its findings are highly relevant for identifying Konawe Regency's position and contribution within the broader national transformation framework. The manufacturing sector serves as the primary driver, but challenges related to sectoral inequality and the need for socio-economic strengthening demand a development strategy that prioritizes not only growth but also sustainability and equity across sectors and regions.

***Monetary Economics in the Transformation of Konawe Regency Economy*:** In the context of economic transformation in Konawe Regency, the regional monetary economy has experienced significant impacts due to structural shifts, particularly following the operation of the Morosi Industrial Zone. As a nickel mining area, Konawe faces major challenges in maintaining price stability, exchange rate balance, and income distribution, all of which are influenced by the dominance of the industrial sector. As explained, rapid industrialization in resource-rich regions can disrupt local monetary stability, leading to inflation and changes in purchasing power. The structural shift toward the processing industry, particularly nickel, has created consequences in the form of income inequality and dependence on global commodities, which in turn affect monetary stability.

The sharp increase in Konawe's GRDP during the 2020-2024 period reflects the positive impact of the nickel downstreaming policy. However, the volatility of global nickel prices has exacerbated regional revenue uncertainty, as discussed by Jones et al. (2009). price fluctuations can reduce household purchasing power and worsen inflation, requiring adaptive monetary policies. Moreover, expansionary monetary policies designed to stimulate industrial growth may also increase inflationary pressure, as noted by Hernández and Ibarra, (2022). This highlights the importance of coordination between fiscal and monetary policies, as emphasized by Abidi, (2023) in the context of West African monetary zones, to ensure long-term economic stability.

In addition, the relationship between Foreign Direct Investment (FDI) inflows and exchange rate volatility plays a crucial role in maintaining regional monetary stability. Research by Kuznets' (1971) indicates that exchange rate instability can reduce FDI inflows, posing challenges to sustaining inclusive economic growth. Exchange rate fluctuations also affect investor confidence, as stressed by Hernández and Ibarra, (2022). making exchange rate management a key aspect of regional monetary policy.

Dependence on the nickel mining sector further increases monetary vulnerability in Konawe, as reflected in the declining competitiveness of other sectors such as agriculture and trade, which have struggled to adapt to industrial transformation. Rostow (2021), reveals that less progressive fiscal policies can exacerbate income inequality, ultimately undermining social and economic stability. Therefore, Konawe must design more inclusive and adaptive monetary and fiscal policies to promote sustainable growth and reduce dependence on a single commodity-based sector.

As part of its economic development strategy, Konawe should integrate economic diversification policies and promote the development of MSMEs and the service sector to strengthen regional fiscal and monetary resilience. This approach aligns with Kuznets (1971), who emphasize the importance of inclusive growth and strengthening industrial support sectors as foundations for long-term economic stability in resource-based regions.

***Agricultural Economy in the Structural Dynamics of Konawe Regency*:** The structural transformation occurring in Konawe Regency, particularly alongside the development of the Morosi Industrial Zone, has had a significant impact on the agricultural sector. The shift of labor from agriculture to industry, known as the process of deagrarianization, has triggered multidimensional changes in the local economy. These changes not only affect the labor market but also income distribution, economic resilience, and regional food security. While industrialization initially stimulates economic growth, its long-term effects often include higher income inequality, increased poverty, and greater vulnerability to external economic shocks. In this context, globalization and financialization exacerbate existing economic disparities, making local responses often insufficient to mitigate their adverse impacts.

The agricultural sector, once the backbone of Konawe's economy, has now been marginalized by industrialization, reducing the region's food security. The erosion of agricultural systems has weakened local capacity to withstand external economic shocks, while overdependence on industry has increased vulnerability to global market fluctuations, particularly unstable commodity prices. The conversion of agricultural land into industrial zones has further aggravated environmental degradation, threatening ecological balance and the sustainability of future agriculture.

The decline in the competitiveness of Konawe's agricultural sector, reflected in the Location Quotient (LQ) and Dynamic Location Quotient (DLQ) indicators, shows a reduction in local food production capacity. This has led to greater dependence on imported food and heightened vulnerability to global food price volatility, ultimately threatening food accessibility and affordability. These conditions contribute to a decline in farmers' incomes, the weakening of rural welfare, and an increase in unemployment and underemployment among agrarian communities.

Beyond socioeconomic impacts, industrial expansion leading to land-use change has also intensified environmental issues. Soil degradation and the loss of agricultural biodiversity have increased the region's vulnerability to climate change and global commodity price volatility. Therefore, integrating industrialization with agricultural revitalization is crucial to ensure sustainable economic development.

Several relevant strategies to strengthen the role of the agricultural sector within Konawe's structural dynamics include enhancing agricultural-industrial integration through policies supporting value chain development, such as investment in agricultural infrastructure (Zhang & Zhang, 2024). Additionally, the adoption of agricultural technology and innovation, such as digitalization and precision agriculture, can improve productivity and the sector's resilience to climate change (Zhou & Han, 2025). Strengthening farmer institutions through cooperatives and local organizations is also key to improving farmers' competitiveness and access to markets and finance.

Redistributive policies that promote access to credit, fiscal incentives, and technology transfer are needed to maintain agricultural sustainability while supporting smallholders in adopting modern and sustainable technologies. Thus, although the industrial sector is becoming increasingly dominant, agriculture remains vital in maintaining regional economic resilience. Achieving sustainable and inclusive growth requires policies that balance industrial development with the revitalization of a more modern and resilient agricultural sector.

Conclusion: This study concludes that the economic transformation of Konawe Regency over the past two decades reflects a highly significant structural shift from an agrarian-based economy toward a resource-based industrial economy, particularly driven by nickel processing. The results of the Location Quotient (LQ) and Dynamic Location Quotient (DLQ) analyses indicate that the manufacturing sector has experienced consistent and sustained competitiveness growth, marking a phase of industrial deepening and reinforcing Konawe's position as a national mining and downstreaming hub. Conversely, the agriculture, education, and health sectors show a declining trend in relative competitiveness, signaling an unbalanced transformation that may create future structural and spatial inequalities.

This transformation aligns with Kuznets' (1971) structural transformation theory and Rostow's (1960) stages of economic growth, wherein the industrial sector becomes the primary driver of development. However, the empirical findings also reaffirm Rodrik's (2016) warning regarding the risks of premature deindustrialization and mono-sectoral dependency. The dominance of the manufacturing sector, without sufficient strengthening of supporting sectors—such as modern agriculture, transportation, education, and healthcare—may hinder sustainable development and exacerbate local socio-economic disparities.

From a monetary economics perspective, rapid industrialization in the nickel mining zone has had mixed impacts on price stability, local exchange rate dynamics, and purchasing power. Global nickel price fluctuations and rising industrial investments have driven regional economic growth but also increased inflationary risks and income distribution imbalances. Therefore, adaptive coordination between regional fiscal and monetary policies is needed to maintain local macroeconomic stability and strengthen economic resilience against global market volatility.

Accordingly, this study emphasizes that Konawe's future development direction must shift from a growth-oriented paradigm toward an inclusive and resilience-oriented development model. The key strategic recommendations include: 1) Economic diversification to reduce dependence on a single processing industry; 2) Revitalization of the agricultural, education, and health sectors as pillars of regional economic resilience; 3) Strengthening spatial integration between industrial zones and rural areas; and 4) Implementation of evidence-based policy to support sustainable downstream industrialization.

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***Policy Referred*:** Emas 2045; regulation on national strategic mining industrialization (Presidential Regulation No. 109/2020), and fiscal-monetary coordination for resilient regional development; Master Plan of National Industrial Development (RIPIN).

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